

Sec. 16-232. Outdoor lighting.

(a) *Purpose.* The benefits of good outdoor lighting are increased safety, energy efficiency, enhancement of the city's evening character and improved security. New technologies have created extremely powerful lights which can inadvertently lead to excessive glare, light trespass and higher energy use. Concerns resulting from excessive glare and light trespass include safety issues, loss of privacy and increased energy costs for everyone. The goal of this lighting section of is to recognize the benefits of outdoor lighting and provide clear guidelines for its installation. Appropriately regulated and properly installed, outdoor lighting will maintain and complement the city's character and contribute to the safety and welfare of the residents of the city.

The intent of this section is to reduce the problems created by improperly designed and installed outdoor lighting by establishing regulations which limit the area that certain outdoor lighting luminaires can illuminate and by limiting the total allowable illumination of lots located in the city.

(b) *Definitions.* For the purposes of this section of the ordinance, terms used shall be defined as follows:

Direct light: Light emitted directly from the lamp, off of the reflector or reflector diffuser, or through the refractor or diffuser lens, of a luminaire.

Fixture: The assembly that houses the lamp or lamps and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.

Flood or spot light: Any light fixture or lamp that incorporates a reflector or a refractor to concentrate the light output into a directed beam in a particular direction.

Glare: Light emitting from a luminaire with an intensity great enough to reduce a viewer's ability to see, and in extreme cases causing momentary blindness.

Height of Luminaire: The height of a luminaire shall be the vertical distance from the ground directly below the centerline of the luminaire to the lowest direct-light-emitting part of the luminaire.

Indirect light: Direct light that has been reflected or has scattered off of other

Lamp: The component of a luminaire that produces the actual

Light trespass: The shining of light produced by a luminaire beyond the boundaries of the property on which it is located at a level which exceeds 0.2 foot candles at the property line or on any surrounding property.

Lumen: (A unit of luminous flux.) One (1) footcandle is one (1) lumen per square foot. For the purposes of this section, the lumen-output values shall be the initial lumen output ratings of a lamp.

Luminaire: This is a complete lighting system, and includes a lamp or lamps and a fixture.

Outdoor Lighting: The night time illumination of an outside area or object by any manmade device located outdoors that produces light by any means.

Temporary outdoor lighting. The specific illumination of an outside area or object by any manmade device located outdoors that produces light by any means for a period of less than thirty (30) days, with at least one hundred eighty (180) days passing before being used again.

(c) *Regulations.* All public and private outdoor lighting installed in the city shall be in conformance with the requirements established by this section.

(d) *Control of glare--Luminaire design factors.*

(1) Any luminaire with a lamp or lamps rated at a total of more than one thousand eight hundred (1,800) lumens, and all flood or spot luminaires with a lamp or lamps rated at a total of more than nine hundred (900) lumens, shall be designed and installed so as to prevent light trespass.

(2) Any luminaire with a lamp or lamps rated at a total of more than one thousand eight hundred (1,800) lumens, and all flood or spot luminaires with a lamp or lamps rated at a total of more than nine hundred (900) lumens, shall not emit more than three (3) percent direct light above a horizontal plane through the lowest direct-light-emitting part of the luminaire.

(3) Any luminaire with a lamp or lamps rated at a total of more than one thousand eight hundred (1,800) lumens, and all flood or spot luminaires with a lamp or lamps rated at a total of more than nine hundred (900) lumens, shall be mounted at a height equal to or less than the value $3 + (D/3)$, where D is the distance in feet to the nearest property boundary. The maximum height of the luminaire shall not exceed thirty (30) feet. Poles shall not exceed twenty-five (25) feet.

(e) *Exceptions.*

(1) Any luminaire with a lamp or lamps rated at a total of one thousand eight hundred (1,800) lumens or less, and all flood or spot luminaires with a lamp or lamps rated at nine hundred (900) lumens or less, may be used without restriction to light distribution or mounting height, except that if any spot or flood luminaire rated nine hundred (900) lumens or less is aimed, directed, or focused so as to cause direct light from the luminaire to be directed toward residential buildings on adjacent or nearby land, or to create glare perceptible to persons operating motorvehicles on public the luminaire shall be redirected or its light output controlled as necessary to eliminate such conditions.

(2) Luminaires used for public-street illumination may be installed at a maximum height of twenty-five (25) feet and may be positioned at that height up to the edge of any bordering property.

(3) All temporary lighting required for construction projects, related to road construction and repair, installation of sewer and water facilities, and other public infrastructure.

(4) All temporary emergency lighting needed by the police or fire departments or other emergency services, as well as all vehicular luminaires, shall be exempt from the requirements of this article.

(5) All hazard warning luminaires required by federal regulatory agencies are exempt from the requirements of this article, except that all luminaires used must be red and must be shown to be as close as possible to the federally required minimum lumen output requirement for the specific task.

(6) Subject to the restrictions of the sign provisions of this chapter, luminaires used primarily for sign illumination may be mounted at any height to a maximum of twenty-five (25) feet, regardless of lumen rating.

(7) Luminaires used for the lighting of areas used exclusively or primarily for outdoor recreation may be mounted at any height.

(f) *Temporary outdoor lighting.*

(1) Any temporary outdoor lighting that conforms to the requirements of this section shall be allowed. Nonconforming temporary outdoor lighting may be permitted by special use permit from the planning board under RSA 674:21 II after considering:

- a. The public and/or private benefits that will result from the temporary lighting;

b. Any annoyance or safety problems that may result from the use of the temporary lighting; and

c. The duration of the temporary nonconforming lighting. The applicant shall submit a detailed description of the proposed temporary nonconforming lighting to the planning board which shall adopt procedures for acting on such applications.

(g) *Nonconfirming luminaires.*

(1) All luminaires lawfully in place prior to the effective date of this section may continue to be used. However, any luminaire that replaces a nonconforming luminaire, or any nonconforming luminaire that is moved must meet the standards of this section.

(h) *Administration.*

(1) The city building permit and other land use applications shall include a statement requiring details of any outdoor lighting.

(Ord. No. O-02-61, 8-13-

Editor's note: Ord. No. O-02-61, adopted Aug. 12, 2002 amended the Code by adding provisions designated as section 16-231. The editor has renumbered the provisions designated as 16-231 as 16-232.